

REMARKS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 1-5, 7-20, and 22-26 are currently pending. Claims 6 and 21 have been cancelled without prejudice or disclaimer; and Claims 1-3, 5, 9-11, 13, 16-18, 20, and 24-26 have been amended by the present amendment. The changes to the claims are supported by the originally filed specification and do not add new matter.¹

In the outstanding Office Action, Claims 1-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0117494 to Mitchell et al. (hereinafter “the ‘494 application”) in view of U.S. Patent No. 7,099,947 to Nadeau et al. (hereinafter “the ‘947 patent”).

REJECTIONS UNDER 35 U.S.C. § 103

Previously presented Claim 1 is directed to a method of determining which, if any, communication protocols can be used to extract status information related to a network device, comprising:

storing, in a device object associated with the network device, protocol specific information obtained from a digital repository for a plurality of communication protocols;

selecting any communication protocol among the plurality of communication protocols;

obtaining, from the device object associated with the network device, the protocol specific information for accessing the network device using the selected communication protocol;

determining if the network device can be accessed using the selected communication protocol and the protocol specific information for accessing the network device obtained from the device object;

¹ See, e.g., Figures 17-19 and the discussion related thereto in Applicants’ specification.

if the determining step determines that the network device can not be accessed using the selected communication protocol, removing, from the device object, the protocol specific information for accessing the network device using the selected communication protocol;

if the determining step determines that the network device can be accessed using the selected communication protocol, performing further tests to determine whether the selected communication protocol can be used to extract the status information from the network device; and

repeating the selecting, obtaining, determining, removing, and performing steps for each protocol of the plurality of communication protocols.

Regarding the rejection of Claim 1 under 35 U.S.C. § 103(a), the '494 application is directed to a method and system for dynamically reconfiguring pervasive device communication channels. In particular, the '494 application discusses a method for use in a client such as a wireless mobile client for providing a dynamically reconfigurable communications channel for a service running on the client. The '494 communications channel includes an in channel comprising a network protocol element and one or more channel filters for understanding data into the service and an out channel comprising a network protocol element and one or more channel filters for formatting data transferred from the service. Further, the '494 application discusses that the in channel and the out channel can be formed differently with different network protocol elements and/or different channel filters. The '494 channel filters typically are configured to understand or handle application-level communications protocols.² Moreover, the '494 application discusses, at paragraph [0018], a communications manager builds communication channels into and out of applications or service components within each pervasive computing network or device. The communications manager has access to a set of available protocol elements defining a network protocol for each channel and a set of available channel filters that define one or more communication parameters. The in channels and out channels for each service

² See '494 application, paragraphs [0011] and [0012].

component are built by combining a single protocol element with one or more channel filters, in the client.

However, it is respectfully submitted that the '494 application fails to disclose storing, in a device object associated with the network device, protocol specific information obtained from a digital repository for a plurality of communication protocols. Rather, the '494 application simply discusses that communications managers 132, 152, which are provided in clients 130, 150, are adapted to build communication channels 142, 158 that are then used by service components 140, 158 in receiving or importing data and in transferring data to other service components 140, 158 or to a service provider 110. The '494 application discusses that **each channel 142, 158 is linked to the specific service component 140, 154** to meet the in-and-out requirements for that particular service component 140, 154 and defines a pathway through which information is transmitted between the service component 140, 154 and a sending or receiving component or entity.³ The '494 application does not disclose that the communication channels 142, 158 are linked to, or associated with, a network device. Thus, the '494 application does not disclose the storing recited in amended Claim 1.

Further, it is respectfully submitted that the '494 application fails to disclose selecting any communication protocol among the plurality of communication protocols. Rather, the '494 application simply discusses, with respect to Figure 2, how a client (i.e., mobile client 130, light mobile client 150, and non-mobile client 170) contains 2 or more services where the communication channels are initially built or reconfigured by a communication manager 210 in the client. The '494 communication channels (in and out) are comprised of protocol elements 216 and channel filters 218, and are built on the client based on the services. The '494 application discusses that the communication manager 210 is adapted with a channel factory 212, which builds or reconfigures the communication channels using the available

³ See '494 application, paragraph [0025].

channel protocol elements 216 and one or more of the available channel filters 218 stored in a memory 214 of the client.⁴ However, in the '494 application, **the channel protocol is associated with a service.** The '494 application does not disclose that the communication manager 210 *selects any communication protocol among the plurality of communication protocols.*

Further, it is respectfully submitted that the '494 application fails to disclose obtaining, from the device object associated with the network device, the protocol specific information for accessing the network device using the selected communication protocol. Rather, as cited in the Office Action, the '494 application simply discusses a provisioning agent 118 that is provided on a service provider 110 to control which services 112, communication filters 114, and protocol elements 116 are made available to which clients 130, 150, 170. The '494 application discusses that once the communication filters 114 and/or protocol elements 116 have been deployed to the client, the client may begin to use the communication filters 114 and protocol elements 116 in forming or reconfiguring service component communication channels.⁵ The '494 protocol element 116 is associated with the client service, not the client device. The '494 application does not disclose obtaining, from the device object *associated with the network device, the protocol specific information for accessing the network device using the selected communication protocol.*

Further, it is respectfully submitted that the '494 application fails to disclose determining if the network device can be accessed using the selected communication protocol and the protocol specific information for accessing the network device obtained from the device object. Rather, paragraph [0026] of the '494 application, cited in the Office Action, simply discusses the communication manager 132 and service components 100, 154 of the client. Further, the '494 application discusses that a provisioning agent 118 transfers or

⁴ See '494 application, paragraphs [0023] and [0028]-[0032].

⁵ Id. at paragraph [0023].

provisions services or software applications 112, communication filters 114, and protocol elements 116 to the clients 130, 150, 170. The '494 application discusses that once the communication filters 114 and/or protocol elements 116 have been deployed to the client 130, 150, 170, the client 130, 150, 170 may begin to use the communication filters 114 and protocol elements 116 in forming or reconfiguring service component communication channels. Further, the '494 application discusses that the service provider 110 may further, such as with the provisioning agent 118, maintain a database (not shown) with information about which filters 114 and which protocol elements 116 have been deployed to which clients 130, 150, 170.⁶ As noted above, the '494 protocol element 116 is associated with the client service, not the client device. The '494 application does not disclose ***determining if any network device*** (e.g., the service provider 110 or the client 130, 150, 170) ***can be accessed using the selected communication protocol and the protocol specific information*** for accessing the network device obtained from the device object.

Further, it is respectfully submitted that the '494 application fails to disclose that if the determining step determines that the network device can not be accessed using the selected communication protocol, removing, from the device object, the protocol specific information for accessing the network device using the selected communication protocol. Rather, paragraph [0037] of the '494 application, which was cited in the Office Action for teaching the removing step, simply discusses that in reconfiguring a communications channel (in and/or out), the outdated protocol elements and/or channel filters may be removed from the client for the service so that the new communications channel is used for the service in the client. Specifically, the '494 application discusses that the communication manager 210 typically replaces versions of the protocol elements 216 and filters 218 that are being replaced and for which it is desirable that future-used channels not include those protocol

⁶ See '494 application, paragraph [0023].

elements 216 and/or filters 218. The '494 application discusses that the replacement may occur **when a network protocol is redefined or replaced or an algorithm used for encryption is periodically replaced for security purposes or for other reasons.**⁷ The '494 application does not disclose that the communication protocol is removed *because the communication protocol cannot access the client.*

Further, it is respectfully submitted that the '494 application fails to disclose repeating the selecting, obtaining, determining, removing, and performing steps for each protocol of the plurality of communication protocols. The Office Action cites Claims 7 and 14 of the '494 application for teaching the repeating step.⁸ Claim 7 of the '494 application recites, inter alia, that "the communications manager reconfigures at least one of the built communications channels based on the additional features **by repeating the building** to create a reconfigured communication channel." Claim 14 of the '494 application recites, inter alia, "repeating the communication request receiving, the channel filters selecting, the combining, and the making, whereby the communication channel is dynamically reconfigured." That is, the '494 application simply discusses repeating the building process to reconfigure the communication channel. The '494 application does not disclose that the repeating is performed *for each protocol of the plurality of protocols.* Thus, the '494 application does not disclose the repeating step recited in amended Claim 1.

Moreover, the Office Action acknowledges, and it is respectfully submitted, that the '494 application fails to disclose that if the determining step determines that the network device can be accessed using the selected communication protocol, performing further tests to determine whether the selected communication protocol can be used to extract the status information from the network device. Rather, the Office Action cites the '947 patent for such

⁷ See '494 application, paragraph [0028].

⁸ See Office Action dated January 26, 2009, page 12.

a teaching.⁹ The '947 patent is directed to a method and apparatus for providing controlled access of requests from virtual private network devices to managed information objects using the simple management protocol.

However, it is respectfully submitted that the '947 patent fails to disclose storing, in a device object associated with the network device, protocol specific information obtained from a digital repository for a plurality of communication protocols; selecting any communication protocol among the plurality of communication protocols; and obtaining, from the device object associated with the network device, the protocol specific information for accessing the network device using the selected communication protocol. Rather, as noted in the Office Action, the '947 patent discusses **only one communication protocol, SNMP**.¹⁰ Thus, the '947 patent does not disclose the storing, selecting, and obtaining recited in Claim 1.

Further, it is respectfully submitted that the '947 patent fails to disclose determining if the network device can be accessed using the selected communication protocol and the protocol specific information for accessing the network device obtained from the device object. In the Response to Arguments section, the Office Action appears to assert that Claim 4 of the '494 application teaches the determining step recited in Claim 1. However, it is noted that Claim 4 of the '494 application recites, inter alia "determining whether **a protocol operation** of the request **is allowed** for the variable." The '494 application does not disclose determining *if the network device can be accessed using the selected communication protocol and the protocol specific information*, as defined in Claim 1.

Further, it is respectfully submitted that the '947 patent fails to disclose that if the determining step determines that the network device can not be accessed using the selected communication protocol, removing, from the device object, the protocol specific information for accessing the network device using the selected communication protocol. In the

⁹ See Office Action dated January 26, 2009, page 6.

¹⁰ Id. at page 22.

Response to Arguments section, the Office Action asserts that the '947 patent "discloses a method and apparatus providing controlled access of requests from virtual private network devices to managed information objects using simple network management protocol wherein a sub-agent examines whether a protocol can be used to access a network device, and management information bases can update, including removing, access information which reads on" the claimed removing step, citing column 16, lines 13-28 and column 11, lines 31-55.¹¹ However, those sections of the '947 patent simply discuss SNMP access to specific MIB managed objects where the communication protocol of SNMP can access the device but may not access specific MIB managed objects because of access privileges. The SNMP protocol is not removed from accessing the device but limited to the information it can access from the MIB.

Additionally, with respect to the deletion of object instances, the '947 patent simply discusses that "because MIB object instances associated with a particular VPN provide appropriate access information in the form of a securityName, object instances may be created, deleted or modified on a per-VPN basis, without requiring the instrumentation to determine whether a particular Object Instance resides within a particular VPN."¹² The '947 patent does not disclose that the MIB object instance is deleted *when a determination is made that the network device can not be accessed using the selected communication protocol*.

Further, it is respectfully submitted that the '947 patent fails to disclose that if the determining step determines that the network device can be accessed using the selected communication protocol, performing further tests to determine whether the selected communication protocol can be used to extract the status information from the network device. The Office Action simply cites column 1, lines 55-65 and column 16, lines 29-36 of

¹¹ See Office Action dated January 26, 2009, page 29.

¹² See '947 patent, column 47-55.

the '947 patent for teaching the performing step. However, column 1, lines 55-65 of the '947 patent simply discuss that a manager with a Network Management Station will use SNMP, to retrieve or modify information about the status or which is part of the configuration of the network device. Further, column 16, lines 29-36 of the '947 patent discussed that a VACM MIB Table and associated MIB Views are used for access control. Specifically, a securityName is extracted from the SNMP request sent to a VPN network device and used to determine accessibility to the MIB and whether or not the request will be processed. The '947 patent does not disclose performing further tests ***to determine whether the selected communication protocol can be used to extract the status information*** from the network device, if access is allowed.

Further, it is respectfully submitted that the '947 patent fails to disclose repeating the selecting, obtaining, determining, removing, and performing steps for each protocol of the plurality of communication protocols. Moreover, the Office Action does not cite the '947 patent for such a teaching.¹³

Thus, no matter how the teachings of the '494 application and the '947 patent are combined, the combination does not teach or suggest, the method of determining which, if any, communication protocols can be used to extract status information related to a network device, as defined in Claim 1. Accordingly, it is respectfully submitted that Claim 1 (and all associated dependent claims) patentably defines over any proper combination of the '494 application and the '947 patent.

Amended Claim 9 is directed to a monitoring computer including a processor configured to determine which, if any, communication protocols can be used to extract status information related to a network device, comprising:

¹³ See Office Action dated January 26, 2009, rejection of Claims 6 and 21 at page 12.

means for storing, in a device object associated with the network device, protocol specific information obtained from a digital repository for a plurality of communication protocols;

means for selecting any communication protocol among the plurality of communication protocols;

means for obtaining, from the device object associated with the network device, the protocol specific information for accessing the network device using the selected communication protocol;

means for determining if the network device can be accessed using the selected communication protocol and the protocol specific information for accessing the network device obtained from the device object;

means for removing, from the device object, the protocol specific information for accessing the network device using the selected communication protocol, when the means for determining determines that the network device can not be accessed using the selected communication protocol;

means for performing further tests to determine whether the selected communication protocol can be used to extract the status information from the network device, when the means for determining determines that the network device can be accessed using the selected communication protocol, and

means for repeating the selecting, obtaining, determining, removing, and performing for each protocol of the plurality of communication protocols.

As noted above, the '494 application and the '947 patent, alone or in proper combination fail to disclose the storing, selecting, obtaining, determining, removing, performing, and repeating steps recited in Claim 1. Thus, the '494 application and the '947 patent fail to disclose the means for storing, means for selecting, means for obtaining, means for determining, means for removing, means for performing, and means for repeating recited in Claim 9. Accordingly, it is respectfully submitted that Claim 9 (and all associated dependent claims) patentably define over any proper combination of the '494 application and the '947 patent.

Amended Claim 16 is directed to a computer program product including a computer readable medium having embedded therein instructions, which when executed by a processor, cause the processor to perform a method for determining which, if any, communication protocols can be used to extract status information related to a network device, comprising:

instructions for storing, in a device object associated with the network device, protocol specific information obtained from a digital repository for a plurality of communication protocols;

instructions for selecting any communication protocol among the plurality of communication protocols;

instructions for obtaining, from the device object associated with the network device, the protocol specific information for accessing the network device using the selected communication protocol;

instructions for determining if the network device can be accessed using the selected communication protocol and the protocol specific information for accessing the network device obtained from the device object;

instructions for removing, from the device object, the protocol-specific information for accessing the network device using the selected communication protocol, when the instructions for determining determine that the network device can not be accessed using the selected communication protocol;

instructions for performing further tests to determine whether the selected communication protocol can be used to extract the status information from the network device, when the instructions for determining determine that the network device can be accessed using the selected communication protocol, and

instructions for repeating the instructions for selecting, instructions for obtaining, instructions for determining, instructions for removing, and performing for each protocol of the plurality of communication protocols.

As noted above, the '494 application and the '947 patent, alone or in proper combination fail to disclose the storing, selecting, obtaining, determining, removing, performing, and repeating steps recited in Claim 1. Thus, the '494 application and the '947

patent fail to disclose the instructions for storing, instructions for selecting, instructions for obtaining, instructions for determining, instructions for removing, instructions for performing, and instructions for repeating recited in Claim 16. Accordingly, it is respectfully submitted that Claim 16 (and all associated dependent claims) patentably define over any proper combination of the '494 application and the '947 patent.

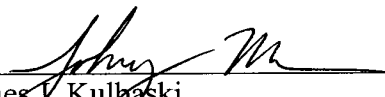
CONCLUSION

Thus, it is respectfully submitted that independent Claims 1, 9, and 16 (and all associated dependent claims) patentably define over any proper combination of the '494 application and the '947 patent.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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